NEUROSCIENCE

An International Journal under the editorial direction of IBRO

Volume 43, 1991

TITLE SECTION
LIST OF CONTENTS
AND AUTHOR INDEX

PERGAMON PRESS
OXFORD · NEW YORK · SEOUL · TOKYO

NEUROSCIENCE

Chief Editors

P. G. KOSTYUK: *Department of General Physiology, A. A. Bogomoletz Institute of Physiology, Academy of Sciences, Ukrainian SSR, 4 Bogomoletz Street, Kiev 24, 252601 GSP, U.S.S.R.*

R. LLINÁS: *Department of Physiology and Biophysics, New York University School of Medicine, 550 First Avenue, New York 10016, U.S.A.*

A. D. SMITH: *Department of Pharmacology, University of Oxford, Mansfield Road, Oxford OX1 3QT, U.K.*

Editorial Board

R. G. BAKER (*New York, NY*)
P. BANKS (*Sheffield*)
K. J. BERKLEY (*Tallahassee, FL*)
D. BIESOLD (*Leipzig*)
A. BJÖRKLUND (*Lund*)
J. P. BOLAM (*Oxford*)
P. BRODAL (*Oslo*)
A. G. BROWN (*Edinburgh*)
G. TEN BRUGGENCATE (*Munich*)
J. BUREŠ (*Prague*)
R. E. BURKE (*Bethesda, MD*)
G. BUZSÁKI (*Newark, NJ*)
A. L. BYSOV (*Moscow*)
F. CLEMENTI (*Milan*)
B. COLLIER (*Montreal*)
A. CONSTANTI (*London*)
M. COSTA (*Adelaide*)
A. C. CUELLO (*Montreal*)
W. J. DAVIS (*Santa Cruz, CA*)
A. C. DOLPHIN (*London*)
I. M. L. DONALDSON (*Edinburgh*)
D. EDGAR (*Liverpool*)
C. EDWARDS (*Tampa, FL*)
M. M. ESIRI (*Oxford*)
R. H. EVANS (*Bristol*)
D. S. FABER (*Buffalo, NY*)
D. M. FAMBROUGH (*Baltimore, MD*)
V. V. FANARDJIAN (*Yerevan*)
R. L. M. FAULL (*Auckland*)
T. F. FREUND (*Budapest*)
G. GABELLA (*London*)
W. F. GANONG (*San Francisco, CA*)
H. M. GERSCHENFELD (*Paris*)
J. GLOWINSKI (*Paris*)
J. A. GRAY (*London*)
A. M. GRAYBIEL (*Cambridge, MA*)
R. W. GUILLERY (*Oxford*)
G. HAEUSLER (*Darmstadt*)
J. HÁMORI (*Budapest*)
L. HEIMER (*Charlottesville, VA*)
M. HERKENHAM (*Bethesda, MD*)
D. E. HILLMAN (*New York, NY*)
T. HÖKFELT (*Stockholm*)
E. HOLTZMAN (*New York, NY*)
P. HOLZER (*Graz*)
O. HORNYKIEWICZ (*Vienna*)
J. HOUNSGAARD (*Copenhagen*)
S. P. HUNT (*Cambridge*)
M. ITO (*Saitama*)
H. JAHNSEN (*Copenhagen*)
G. JAIM-ETCHEVERRY (*Buenos Aires*)
B. E. JONES (*Montreal*)
G. JU (*Xi'an*)
J. S. KELLY (*Edinburgh*)
B. I. KHODOROV (*Moscow*)
G. W. KREUTZBERG (*Munich*)
O. A. KRISHTAL (*Kiev*)
K. KRNJEVIĆ (*Montreal*)
L. MAFFEI (*Pisa*)
C. A. MARSDEN (*Nottingham*)
M. R. MATTHEWS (*Oxford*)
P. B. C. MATTHEWS (*Oxford*)
A. I. MATUS (*Basle*)
R. E. MCCAMAN (*Duarte, CA*)
R. Y. MOORE (*Pittsburgh, PA*)
D. K. MOREST (*Farmington, CT*)
I. G. MORGAN (*Canberra*)
J. F. MORRIS (*Oxford*)
É. MUGNAINI (*Storrs, CT*)
W. J. H. NAUTA (*Cambridge, MA*)
F. ORREGO (*Santiago*)
J. M. PALACIOS (*Basle*)
S. L. PALAY (*Concord, MA*)
R. E. PASSINGHAM (*Oxford*)
V. H. PERRY (*Oxford*)
J. M. POLAK (*London*)
P. RAKIC (*New Haven, CA*)
H. J. RALSTON (*San Francisco, CA*)
T. S. REESE (*Bethesda, MD*)
F. REINOSO-SUÁREZ (*Madrid*)
M. RÉTHELYI (*Budapest*)
P. N. RUDOMIN (*Mexico*)
M. L. SHELANSKI (*New York, NY*)
S. M. SHERMAN (*Stony Brook, NY*)
M. L. SHIK (*Moscow*)
M. V. SOFRONIEW (*Cambridge*)
P. SOMOGYI (*Oxford*)
C. SOTELO (*Paris*)
K. STARKE (*Freiburg*)
M. S. STARR (*London*)
M. STERIADE (*Québec*)
C. F. STEVENS (*La Jolla, CA*)
L. STJÄRNE (*Stockholm*)
C. STUMPF (*Vienna*)
K. SUZUKI (*Chapel Hill, NC*)
R. F. THOMPSON (*Irvine, CA*)
A. M. THOMSON (*London*)
E. S. VIZI (*Budapest*)
J. VOOGD (*Rotterdam*)
L. VYKLICKY (*Prague*)
X. S. T. WAN (*Beijing*)
R. WERMAN (*Jerusalem*)
W. D. WILLIS (*Galveston, TX*)
H. WINKLER (*Innsbruck*)
L. R. YOUNG (*Cambridge, MA*)
S. ZEKI (*London*)
H. ZIMMERMANN (*Frankfurt*)

IBRO Publications Committee

Chairman, A. D. SMITH; R. LLINÁS, D. G. R. OTTOSON, D. P. PURPURA, P. G. STRATA.

Aims and Scope:
Neuroscience publishes papers describing the results of original research on any aspect of the scientific study of the nervous system. Since one of the chief aims of the Journal is to promote communication between neuroscientists, the type of paper most suitable for publication is that in which new observations are clearly and succinctly reported and in which the purpose of the study is made meaningful to scientists of other disciplines. Any paper, however short, will be considered for publication provided that it reports significant, new and carefully confirmed findings with full experimental details. For *Instructions to Authors* see Vol. 40, No. 1, pp. iii–v.

Production Editor: A. P. CULLIS. *Editorial Assistants*: S. J. RUSSELL, S. A. WILLIAMS.

Copyright © 1991 IBRO
For Copyright details see Back Cover

LIST OF CONTENTS

VOLUME 43 NUMBER 1 1991

K. K. Miller, A. Verma, S. H. Snyder and **C. A. Ross**	Localization of an endoplasmic reticulum calcium ATPase mRNA in rat brain by *in situ* hybridization	1
Z. Xie, W. Morishita, T. Kam, H. Maretić and **B. R. Sastry**	Studies on substances that induce long-term potentiation in guinea-pig hippocampal slices	11
E. Ban, G. Milon, N. Prudhomme, G. Fillion and **F. Haour**	Receptors for interleukin-1 (α and β) in mouse brain: mapping and neuronal localization in hippocampus	21
G. Wolf, S. Fischer, P. Hass, K. Abicht and **G. Keilhoff**	Magnesium sulphate subcutaneously injected protects against kainate-induced convulsions and neurodegeneration: *in vivo* study on the rat hippocampus	31
G. Keilhoff and **S. L. Erdő**	Parallel development of excitotoxic vulnerability to *N*-methyl-D-aspartate and kainate in dispersed cultures of the rat cerebral cortex	35
J. W. Miller, M. E. Bardgett and **B. C. Gray**	The role of the laterodorsal tegmental nucleus of the rat in experimental seizures	41
G. Al-Tajir and **M. S. Starr**	Anticonvulsant effect of striatal dopamine D_2 receptor stimulation: dependence on cortical circuits?	51
M. Verhage, F. H. Lopes da Silva and **W. E. J. M. Ghijsen**	Activity-dependent recruitment of endogenous glutamate for exocytosis	59
P. Giraud, C. Kowalski, F. Barthel, D. Becquet, M. Renard, M. Grino, F. Boudouresque and **J. P. Loeffler**	Striatal proenkephalin turnover and gene transcription are regulated by cyclic AMP and protein kinase C-related pathways	67
A. H. Hainsworth, J. Röper, R. Kapoor and **F. M. Ashcroft**	Identification and electrophysiology of isolated pars compacta neurons of guinea-pig substantia nigra	81
S. B. Blunt, P. Jenner and **C. D. Marsden**	The effect of L-DOPA and carbidopa treatment on the survival of rat fetal dopamine grafts assessed by tyrosine hydroxylase immunohistochemistry and [^{3}H]mazindol autoradiography	95
K. Almarghini, A. Remy and **M. Tappaz**	Immunocytochemistry of the taurine biosynthesis enzyme, cysteine sulfinate decarboxylase, in the cerebellum: evidence for a glial localization	111
C. Marchetti, C. Carignani and **M. Robello**	Voltage-dependent calcium currents in dissociated granule cells from rat cerebellum	121
N. J. Sucher, T. P. O. Cheng and **S. A. Lipton**	Cryopreservation of postnatal rat retinal ganglion cells: persistence of voltage- and ligand-gated ionic currents	135
B. J. Jasmin, J.-P. Changeux and **J. Cartaud**	Organization and dynamics of microtubules in *Torpedo marmorata* electrocyte: selective association with specialized domains of the postsynaptic membrane	151
C. A. Bennett-Clarke, N. L. Chiaia, R. S. Crissman and **R. W. Rhoades**	The source of the transient serotoninergic input to the developing visual and somatosensory cortices in rat	163

C. A. Hunt, D. Z. Pang and E. G. Jones	Distribution and density of GABA cells in intralaminar and adjacent nuclei of monkey thalamus	185
C. Gouardères, A. Beaudet, J.-M. Zajac, J. Cros and R. Quirion	High resolution radioautographic localization of [^{125}I]FK-33-824-labelled mu opioid receptors in the spinal cord of normal and deafferented rats	197
E. Madarasz, D. T. Theodosis and D. A. Poulain	*In vitro* formation of type 2 astrocytes derived from postnatal rat hypothalamus or cerebral cortex	211
N. A. Borisova, A. Y. Sapronova, E. V. Proshlyakova and M. V. Ugrumov	Ontogenesis of the hypothalamic catecholaminergic system in rats: synthesis, uptake and release of catecholamines	223
J. H. Pazo and M. Gonzalez	Effects of central and peripheral inputs on single pineal cell activity in the rat	231
K. V. Baev, V. B. Esipenko and Yu. P. Shimansky	Afferent control of central pattern generators: experimental analysis of locomotion in the decerebrate cat	237
U. Windhorst and T. Kokkoroyiannis	Interaction of recurrent inhibitory and muscle spindle afferent feedback during muscle fatigue	249
C. A. Maggi and S. Giuliani	The neurotransmitter role of calcitonin gene-related peptide in the rat and guinea-pig ureter: effect of a calcitonin gene-related peptide antagonist and species-related differences in the action of omega conotoxin on calcitonin gene-related peptide release from primary afferents	261
K. Fried, J. Arvidsson, B. Robertson and K. Pfaller	Anterograde horseradish peroxidase tracing and immunohistochemistry of trigeminal ganglion tooth pulp neurons after dental nerve lesions in the rat	269
M. C. Brown, C. M. Booth, E. R. Lunn and V. H. Perry	Delayed response to denervation in muscles of C57BL/O1a mice	279
BOOK REVIEW E. B. Keverne	*The Vertebrate Olfactory System.* N. Halasz	285
VOLUME 43 NUMBER 2/3		1991
S. T. Lu, M. S. Hämäläinen, R. Hari, R. J. Ilmoniemi, O. V. Lounasmaa, M. Sams and V. Vilkman	Seeing faces activates three separate areas outside the occipital visual cortex in man	287
N. Kato, J. M. R. Ferrer and D. J. Price	Regressive changes among corticocortical neurons projecting from the lateral suprasylvian cortex to area 18 of the kitten's visual cortex	291
I. O. Volkov and A. V. Galazjuk	Formation of spike response to sound tones in cat auditory cortex neurons: interaction of excitatory and inhibitory effects	307
S. Retaux, M. J. Besson and J. Penit-Soria	Synergism between D_1 and D_2 dopamine receptors in the inhibition of the evoked release of [^{3}H]GABA in the rat prefrontal cortex	323
P. Friedrich, L. Fesus, E. Tarcsa and G. Czéh	Protein cross-linking by transglutaminase induced in long-term potentiation in the CA1 region of hippocampal slices	331

J. A. del Rio, B. Heimrich, E. Soriano, H. Schwegler and **M. Frotscher**	Proliferation and differentiation of glial fibrillary acidic protein-immunoreactive glial cells in organotypic slice cultures of rat hippocampus	335
R. P. A. Gaykema, J. van der Kuil, L. B. Hersh and **P. G. M. Luiten**	Patterns of direct projections from the hippocampus to the medial septum–diagonal band complex: anterograde tracing with *Phaseolus vulgaris* leucoagglutinin combined with immunohistochemistry of choline acetyltransferase	349
K. Nishino, C.-S. Lin, J. K. Morse and **J. N. Davis**	DSP4 treatment worsens hippocampal pyramidal cell damage after transient ischemia	361
A. J. MacLennan, N. Brecha, M. Khrestchatisky, C. Sternini, N. J. K. Tillakaratne, M.-Y. Chiang, K. Anderson, M. Lai and **A. J. Tobin**	Independent cellular and ontogenetic expression of mRNAs encoding three α polypeptides of the rat $GABA_A$ receptor	369
K. Sato, J.-H. Zhang, T. Saika, M. Sato, K. Tada and **M. Tohyama**	Localization of glycine receptor α_1 subunit mRNA-containing neurons in the rat brain: an analysis using *in situ* hybridization histochemistry	381
L. J. Martin, M. G. Hadfield, T. L. Dellovade and **D. L. Price**	The striatal mosaic in primates: patterns of neuropeptide immunoreactivity differentiate the ventral striatum from the dorsal striatum	397
A. R. Cools	Differential role of mineralocorticoid and glucocorticoid receptors in the genesis of dexamphetamine-induced sensitization of mesolimbic, α_1 adrenergic receptors in the ventral striatum	419
F. W. Tse, S. Weiss and **B. A. MacVicar**	Quisqualate agonists occlude kainate-induced current in cultured striatal neurons	429
J. S. Williams, I. Berbekar and **S. Weiss**	*N*-Methyl-D-aspartate evokes the release of somatostatin from striatal interneurons in primary culture	437
S. de Lacalle, I. Iraizoz and **L. M^a Gonzalo**	Differential changes in cell size and number in topographic subdivisions of human basal nucleus in normal aging	445
K. J. Page, B. J. Everitt, T. W. Robbins, H. M. Marston and **L. S. Wilkinson**	Dissociable effects on spatial maze and passive avoidance acquisition and retention following AMPA- and ibotenic acid-induced excitotoxic lesions of the basal forebrain in rats: differential dependence on cholinergic neuronal loss	457
J. D. Porter and **I. M. L. Donaldson**	The anatomical substrate for cat extraocular muscle proprioception	473
S. Ceccatelli, J. Fahrenkrug, M. J. Villar and **T. Hökfelt**	Vasoactive intestinal polypeptide/peptide histidine isoleucine immunoreactive neuron systems in the basal hypothalamus of the rat with special reference to the portal vasculature: an immunohistochemical and *in situ* hybridization study	483
S. K. Sikdar, P. Legendre, B. Dupouy and **J. D. Vincent**	Maturation of a transient outward potassium current in mouse fetal hypothalamic neurons in culture	503

D. M. Berson, A. M. Graybiel, W. D. Bowen and **L. A. Thompson**	Evidence for intrinsic expression of enkephalin-like immunoreactivity and opioid binding sites in cat superior colliculus	513
G. M. Halliday and **E. M. McLachlan**	A comparative analysis of neurons containing catecholamine-synthesizing enzymes and neuropeptide Y in the ventrolateral medulla of rats, guinea-pigs and cats	531
G. M. Halliday and **E. M. McLachlan**	Four groups of tyrosine hydroxylase-immunoreactive neurons in the ventrolateral medulla of rats, guinea-pigs and cats identified on the basis of chemistry, topography and morphology	551
N. M. Chmykhova, O. A. Karamian and **V. M. Kozhanov**	Sensorimotor connections in the lumbar spinal cord of the young rat: a morphological study	569
O. A. Karamian, V. M. Kozhanov and **N. M. Chmykhova**	Relation between structural and release parameters at the young rat sensorimotor connection	577
R. F. Regan and **D. W. Choi**	Glutamate neurotoxicity in spinal cord cell culture	585
C. R. Morton, W. D. Hutchison and **I. A. Hendry**	Intraspinal release of substance P and calcitonin gene-related peptide during opiate dependence and withdrawal	593
M. W. Salter and **J. L. Henry**	Responses of functionally identified neurones in the dorsal horn of the cat spinal cord to substance P, neurokinin A and physalaemin	601
E. van Asselt, F. de Graaf, M. J. Smit-Onel and **W. van Raamsdonk**	Spinal neurons in the zebrafish labeled with Fluoro-Gold and wheat-germ agglutinin	611
T. R. Insel, R. Gelhard and **L. E. Shapiro**	The comparative distribution of forebrain receptors for neurohypophyseal peptides in monogamous and polygamous mice	623
A. Ribeiro-da-Silva, R. L. Kenigsberg and **A. C. Cuello**	Light and electron microscopic distribution of nerve growth factor receptor-like immunoreactivity in the skin of the rat lower lip	631
R. L. Parsons and **L. M. Konopka**	Analysis of the galanin-induced decrease in membrane excitability in mudpuppy parasympathetic neurons	647
P. Milner, J. Lincoln, L. A. Corr, J. A. Aberdeen and **G. Burnstock**	Neuropeptide Y in non-sympathetic nerves of the rat: changes during maturation but not after guanethidine sympathectomy	661
A. S. Tischler, L. A. Ruzicka and **R. A. DeLellis**	Regulation of neurotensin content in adrenal medullary cells: comparison of PC12 cells to normal rat chromaffin cells *in vitro*	671
L. Bjerknes, T. J. Coderre, P. G. Green, A. I. Basbaum and **J. D. Levine**	Neutrophils contribute to sympathetic nerve terminal-dependent plasma extravasation in the knee joint of the rat	679
B. Palouzier-Paulignan, M.-C. Chamoin and **J.-P. Ternaux**	Choline uptake in cholinergic nodose cell bodies	687

M. L. Latash and **G. L. Gottlieb** — Reconstruction of shifting elbow joint compliant characteristics during fast and slow movements — 697

F. Rodríguez de Fonseca, M. Cebeira, J. J. Fernández-Ruiz, M. Navarro and **J. A. Ramos** — Effects of pre- and perinatal exposure to hashish extracts on the ontogeny of brain dopaminergic neurons — 713

AUTHOR INDEX

Aberdeen, J. A. 661
Abicht, K. 31
Al-Tajir, G. 51
Almarghini, K. 111
Anderson, K. 369
Arvidsson, J. 269
Ashcroft, F. M. 81
Asselt, E. van 611

Baev, K. V. 237
Ban, E. 21
Bardgett, M. E. 41
Barthel, F. 67
Basbaum, A. I. 679
Beaudet, A. 197
Becquet, D. 67
Bennett-Clarke, C. A. 163
Berbekar, I. 437
Berson, D. M. 513
Besson, M. J. 323
Bjerknes, L. 679
Blunt, S. B. 95
Booth, C. M. 279
Borisova, N. A. 223
Boudouresque, F. 67
Bowen, W. D. 513
Brecha, N. 369
Brown, M. C. 279
Burnstock, G. 661

Carignani, C. 121
Cartaud, J. 151
Cebeira, M. 713
Ceccatelli, S. 483
Chamoin, M.-C. 687
Changeux, J.-P. 151
Cheng, T. P. O. 135
Chiaia, N. L. 163
Chiang, M.-Y. 369
Chmykhova, N. M. 569, 577
Choi, D. W. 585
Coderre, T. J. 679
Cools, A. R. 419
Corr, L. A. 661
Crissman, R. S. 163
Cros, J. 197
Cuello, A. C. 631
Czéh, G. 331

Davis, J. N. 361
DeLellis, R. A. 671
Dellovade, T. L. 397
Donaldson, I. M. L. 473
Dupouy, B. 503

Erdö, S. L. 35
Esipenko, V. B. 237
Everitt, B. J. 457

Fahrenkrug, J. 483
Fernández-Ruiz, J. J. 713
Ferrer, J. M. R. 291
Fesus, L. 331
Fillion, G. 21
Fischer, S. 31
Fried, K. 269
Friedrich, P. 331
Frotscher, M. 335

Galazjuk, A. V. 307
Gaykema, R. P. A. 349
Gelhard, R. 623
Ghijsen, W. E. J. M. 59
Giraud, P. 67
Giuliani, S. 261
Gonzalez, M. 231
Gonzalo, L. Ma 445
Gottlieb, G. L. 697
Gouardères, C. 197
Graaf, F. de 611
Gray, B. C. 41
Graybiel, A. M. 513
Green, P. G. 679
Grino, M. 67

Hadfield, M. G. 397
Hainsworth, A. H. 81
Halliday, G. M. 531, 551
Hämäläinen, M. S. 287
Haour, F. 21
Hari, R. 287
Hass, P. 31
Heimrich, B. 335
Hendry, I. A. 593
Henry, J. L. 601
Hersh, L. B. 349
Hökfelt, T. 483
Hunt, C. A. 185
Hutchison, W. D. 593

Ilmoniemi, R. J. 287
Insel, T. R. 623
Iraizoz, I. 445

Jasmin, B. J. 151
Jenner, P. 95
Jones, E. G. 185

Kam, T. 11

Kapoor, R. 81
Karamian, O. A. 569, 577
Kato, N. 291
Keilhoff, G. 31, 35
Kenigsberg, R. L. 631
Keverne, E. B. 285
Khrestchatisky, M. 369
Kokkoroyiannis, T. 249
Konopka, L. M. 647
Kowalski, C. 67
Kozhanov, V. M. 569, 577
Kuil, J. van der 349

Lacalle, S. de 445
Lai, M. 369
Latash, M. L. 697
Legendre, P. 503
Levine, J. D. 679
Lin, C.-S. 361
Lincoln, J. 661
Lipton, S. A. 135
Loeffler, J. P. 67
Lopes da Silva, F. H. 59
Lounasmaa, O. V. 287
Lu, S. T. 287
Luiten, P. G. M. 349
Lunn, E. R. 279

MacLennan, A. J. 369
MacVicar, B. A. 429
Madarasz, E. 211
Maggi, C. A. 261
Marchetti, C. 121
Maretić, H. 11
Marsden, C. D. 95
Marston, H. M. 457
Martin, L. J. 397
McLachlan, E. M. 531, 551
Miller, J. W. 41
Miller, K. K. 1
Milner, P. 661
Milon, G. 21
Morishita, W. 11
Morse, J. K. 361
Morton, C. R. 593

Navarro, M. 713
Nishino, K. 361

Page, K. J. 457
Palouzier-Paulignan, B. 687
Pang, D. Z. 185
Parsons, R. L. 647
Pazo, J. H. 231
Penit-Soria, J. 323
Perry, V. H. 279
Pfaller, K. 269
Porter, J. D. 473
Poulain, D. A. 211
Price, D. J. 291
Price, D. L. 397
Proshlyakova, E. V. 223
Prudhomme, N. 21

Quirion, R. 197

Raamsdonk, W. van 611
Ramos, J. A. 713
Regan, R. F. 585
Remy, A. 111
Renard, M. 67
Retaux, S. 323
Rhoades, R. W. 163
Ribeiro-da-Silva, A. 631
Rio, J. A. del 335
Robbins, T. W. 457
Robello, M. 121
Robertson, B. 269
Rodríguez de Fonseca, F. 713
Röper, J. 81
Ross, C. A. 1
Ruzicka, L. A. 671

Saika, T. 381
Salter, M. W. 601
Sams, M. 287
Sapronova, A. Y. 223
Sastry, B. R. 11
Sato, K. 381
Sato, M. 381
Schwegler, H. 335
Shapiro, L. E. 623
Shimansky, Yu. P. 237
Sikdar, S. K. 503
Smit-Onel, M. J. 611
Snyder, S. H. 1
Soriano, E. 335
Starr, M. S. 51
Sternini, C. 369
Sucher, N. J. 135

Tada, K. 381
Tappaz, M. 111
Tarcsa, E. 331
Ternaux, J.-P. 687
Theodosis, D. T. 211
Thompson, L. A. 513
Tillakaratne, N. J. K. 369
Tischler, A. S. 671
Tobin, A. J. 369
Tohyama, M. 381
Tse, F. W. 429

Ugrumov, M. V. 223

Verhage, M. 59
Verma, A. 1
Vilkman, V. 287
Villar, M. J. 483
Vincent, J. D. 503
Volkov, I. O. 307

Weiss, S. 429, 437
Wilkinson, L. S. 457
Williams, J. S. 437
Windhorst, U. 249
Wolf, G. 31

Xie, Z. 11

Zajac, J.-M. 197
Zhang, J.-H. 381

SEND FOR A FREE SAMPLE COPY OF...

NEUROCHEMISTRY INTERNATIONAL

THE JOURNAL FOR THE PUBLICATION OF CELLULAR AND MOLECULAR ASPECTS OF NEUROCHEMISTRY IN THE FORM OF ORIGINAL AND RAPID RESEARCH COMMUNICATIONS AND ALSO CRITICAL REVIEWS AND COMMENTARIES.

Executive Editors: **N N OSBORNE** (Chairman), *Nuffield Laboratory of Ophthalmology, University of Oxford, Walton Street, Oxford OX2 6AW, UK,* **J ROSSIER,** *CNRS, Laboratoire de Physiologie Nerveuse, 91190 Gif-sur-Yvette, France,* **G A R JOHNSTON,** *Department of Pharmacology, University of Sydney, Sydney, NSW 2006, Australia,* **W LOVENBERG,** *Merrell-Dow Research Institute, 2110 E. Galbraith Road, Cincinnati, OH 45215, USA,* **R TAPIA,** *Instituto de Fisiologia Celular, Universidad Nacional Autonoma, AP 70-600, 04510 Mexico DF, Mexico* and **K KURIYAMA,** *Department of Pharmacology, Kyoto Prefectural University of Medicine, Kawaramachi-Hirokoji, Kamikyo-ku, Kyoto, Japan*

Neurochemistry International publishes papers primarily concerned with the metabolism and function of the nervous system. This also incorporates the chemical aspects of the anatomy, pathology, physiology, pharmacology and genetics of the nervous system, as well as the biochemistry of the nervous tissues. Other papers demonstrate the relationship of fundamental neurochemical observations to basic neurology, neuropharmacology, chemical pathology and neurotransmission of the nervous system.

A Selection of Papers
J M PALACIOS, C WAEBER, G MENGOD & D HOYER (Switzerland), Critique: Autoradiography of 5-HT receptors: a critical appraisal.
X LIU & K E VRANA (USA), Commentary: Leucine zippers and coiled-coils in the aromatic amino acid hydroxylases.
K OGITA, T KOUDA, T SUZUKI, A OHKAWARA, R ENOMOTO, T NABESHIMA & Y YONEDA (Japan), Differential effects of SH-reactive agents on [^{3}H](±)-3-2(carboxypiperazin-4-yl)propyl-1-phosphonate and [^{3}H]glutamate binding in brain synaptic membranes treated with Triton X-100.
D J M REYNOLDS, R A LESLIE, D G GRAHAME-SMITH & J M HARVEY (UK), Autoradiographic localization of 5-HT$_3$ receptor ligand binding in the cat brainstem.

Indexed/Abstracted in: *Current Awareness in Biological Sciences (CABS), Chem Abstr Serv, Biosis Data, Curr Cont ASCA, Excerp Med, PASCAL-CNRS Data, Psychol Abstr, Curr Cont/ Life Sci, Curr Cont ISA/BIOMED Data, Curr Cont Sci Cit Ind, Curr Cont SCISEARCH Data*

(00643)
1991: Volumes 18 & 19 (8 issues)
Annual subscription (1991) **DM 740.00**
Two-year rate (1991/92) **DM 1406.00**
ISSN: 0197-0186

PERGAMON PRESS

Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, UK

Advertising rate card available on request. Back issues and current subscriptions are also available in microform. Prices shown include postage and insurance. German Mark (DM) prices quoted apply in Europe, Africa, Asia/Australasia (with the exception of Japan). For the rest of the world including Japan apply to the nearest Pergamon office. Prices and proposed publication dates are subject to change without prior notice.

INTERNATIONAL BRAIN RESEARCH ORGANIZATION

World Federation of Neuroscientists

Incorporated as an independent international organization

Ottawa 1961

D. P. Purpura (U.S.A.)	*President*
M. Ito (Japan)	*Honorary President*
D. Ottoson (Sweden)	*Secretary-General*
M. Imbert (France)	*Executive Secretary and Treasurer*
R. Naquet (France)	*Liaison Officer with UNESCO*
D. B. Tower (U.S.A.)	*Liaison Officer with WHO*
P. G. Kostyuk (U.S.S.R.)	*Liaison Officer with IUPS*
L. H. Van der Tweel (The Netherlands)	*Liaison Officer with ICSU*
P. G. Strata (Italy)	*Director, Workshop Programme and Symposia Programme*
A. D. Smith (U.K.)	*Director, Publications Programme*
E. S. Vizi (Hungary)	*Director, Fellowships Programme*
C. Blakemore (U.K.)	*Managing Editor, IBRO News*

Secretary-General

Prof. D. Ottoson
51, Bd. de Montmorency
75016 Paris
France

Executive Secretary

Dr M. Imbert
Lab. des Neurosciences de la Vision
Université Pierre et Marie Curie
9, Quai St Bernard
75005 Paris
France

IBRO Secretariat
Assistant Executive Secretary

Ms Olga Popoff
51, Bd. de Montmorency
75016 Paris
France

IBRO NEUROSCIENCE CALENDAR

The International Brain Research Organization publishes a calendar of events in the neurosciences. It is hoped that the calendar, which is published in *IBRO News*, will help scientists in the field to plan ahead for the meetings they wish to attend. The aim of the calendar is to contain as many announcements as possible of forthcoming scientific meetings in the neurosciences throughout the whole world. It is a form suitable for mounting on a wall.

IBRO invites organizers of meetings to send information on their meetings, together with a statement as to whether the date is definite or provisional, to: Office of *IBRO News*, University Laboratory of Physiology, Parks Road, Oxford OX1 3PT, U.K.

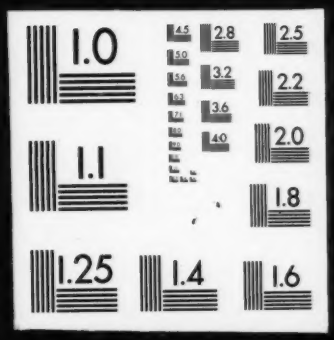
It is a condition of publication that manuscripts submitted to this Journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to IBRO if and when the article is accepted for publication. However, assignment of copyright is not required from authors who work for organizations which do not permit such assignment. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature, and translations. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the copyright holder.

Photocopying information for users in the U.S.A. The Item-fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyright holder for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service provided the stated fee for copying, beyond that permitted by Section 107 or 108 of the United States Copyright Law, is paid. The appropriate remittance of $3.00 per copy per article is paid directly to the Copyright Clearance Center Inc., 27 Congress Street, Salem, MA 01970, U.S.A.

Permission for other use. The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the Publisher for such copying.

The Item-fee Code for this publication is: 0306-4522/91 $3.00 + 0.00.

PRINTED IN ENGLAND BY BPCC WHEATONS LTD, EXETER


1.0
1.1
1.25
1.4
1.6
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.8